

Name of Work	:	Developments works to be under taken in Ward No.05 of BBMP around Solid Waste Disposal Processing units Bellahalli, Bagaluru and Kattigenahalli Byatarayanapura Constituency.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore
Contractor	:	Sri.A G. Narayana Swamy.
Date of Testing	:	13-09-2021
Type of Mix	:	WMM
Sample I/D	:	WMM 12

GRADATION FOR WMM

(As per MORT&H 400-11)

Sample Location:	Srinivasa Garden Layout 2nd Main Road	Date of Sampling:	12-09-2021			
		Date of testing:	13-09-2021			
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0			
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits	
53	0	0	0.00	100.00	100.00	
45	377	377	3.77	96.23	95-100	
37.5	2328	2705	27.05	72.95	60-80	
30	2492	5197	51.97	48.03	40-60	
25	1488.0	6685	66.85	33.15	25-40	
20	790.0	7475	74.75	25.25	15-30	
0.6	866.0	8341	83.41	16.59	8.0-22.0	
0.075	990.0	9331	93.31	6.69	0-8	
Pan	669.0	10000				
Total	10000.0					

Note:

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Consultant's Representative

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Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore
Contractor	:	Sri.A G. Narayana Swamy.
Date of Testing	:	13-09-2021
Type of Mix	:	WMM
Sample I/D	:	WMM 4

GRADATION FOR WMM

(As per MORT&H 400-11)

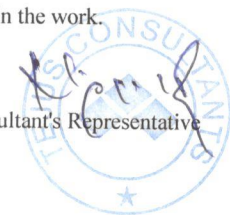
Sample Location:	Thirumenahalli Main Road	Date of Sampling:	12-09-2021			
		Date of testing:	13-09-2021			
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0			
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits	
53	0	0	0.00	100.00	100.00	
45	366	366	3.66	96.34	95-100	
37.5	2415	2781	27.81	72.19	60-80	
30	2480	5261	52.61	47.39	40-60	
25	1488.0	6749	67.49	32.51	25-40	
2.36	795.0	7544	75.44	24.56	15-30	
0.6	830.0	8374	83.74	16.26	8.0-22.0	
0.075	995.0	9369	93.69	6.31	0-8	
Pan	631.0	10000				
Total	10000.0					

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Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore
Contractor	:	Sri.A G. Narayana Swamy.
Date of Testing	:	13-09-2021
Type of Mix	:	WMM
Sample I/D	:	WMM 3

GRADATION FOR WMM

(As per MORT&H 400-11)

Sample Location:	Chokkanahalli Layout Main Road	Date of Sampling:	12-09-2021			
		Date of testing:	13-09-2021			
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0			
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits	
53	0	0	0.00	100.00	100.00	
75	367	367	3.67	96.33	95-100	
90	2415	2782	27.82	72.18	60-80	
106	2480	5262	52.62	47.38	40-60	
150	1488.0	6750	67.50	32.50	25-40	
200	795.0	7545	75.45	24.55	15-30	
250	830.0	8375	83.75	16.25	8.0-22.0	
300	995.0	9370	93.70	6.30	0-8	
Pan	630.0	10000				
Total	10000.0					

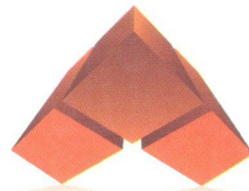
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Consultant's Representative





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Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))

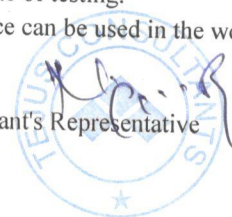
	Date: 13-09-2021	
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainage	Srinivasa Garden Layout 1st Main at Ch:185	Srinivasa Garden Layout 2nd Main at Ch:140
Wt. of wet material from hole (Ww) gms.	5981	5992
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10594
Wt. of sand in hole cone (w3) gms.	4405	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3326
Bulk density of sand (ys)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (yb)=(Ww/w4*(ys))gm/cc	2.37	2.38
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)=(100yb/100+mc)gm/cc	2.23	2.24
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.31	98.64
% compaction required	98%	98%

Note:

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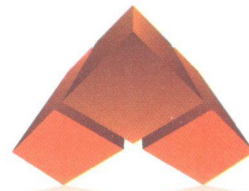
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Consultant's Representative



TEJUS CONSULTANTS

No. 5B, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com



Project	Development works to be under taken in ward no.5 of BBMP around solidwaste disposal procesing units bellalli bagaluru and kattigenalli , byatarayanapura constituency ,
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))

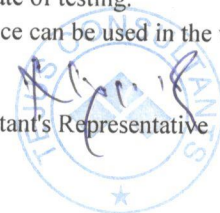
	Date: 13-09-2021	
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainage	Chokkanahalli Layout Main Road at Ch:440	Chokkanahalli Layout Main Road at Ch:560
Wt. of wet material from hole (Ww) gms.	5988	5990
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10594
Wt. of sand in hole+ cone (w3) gms.	4405	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3326
Bulk density of sand (ys)gm/cc	1.32	1.32
Bulk density of material (i.e. wt. of the wet material) (yb) = (Ww/(w4*(ys)))gm/cc	2.38	2.38
Moisture meter reading (moisture content)	6.40	6.20
Result		
FDD (Wt. of the dry material) = (100yb/100+mc)gm/cc	2.23	2.24
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.42	98.61
% compaction required	98%	98%

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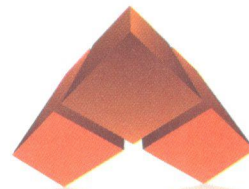
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Consultant's Representative



TEJUS CONSULTANTS

No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

**TEJUS**

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Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

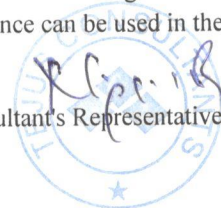
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))

	Date: 13-09-2021	
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainage	Thirumenahalli Main Road at Ch:70	Thirumenahalli Main Road at Ch:135
Wt. of wet material from hole (Ww) gms.	5986	5993
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10594
Wt. of sand in hole+cone (w3) gms.	4405	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3326
Bulk density of sand(γ_s)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material(γ_b))=(Ww/w4*(γ_s))gm/cc	2.38	2.38
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)=($100\gamma_b/100+mc$)gm/cc	2.23	2.24
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.39	98.66
% compaction required	98%	98%

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Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material		WMM		Proposed Use	WMM
Sample Location		Agrahara Layout Main Road		Date of Sampling	23-09-2021
				Date of Testing	24-09-2021
Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	627	83	523	75
16.0	12.5	1142	122	1012	118
12.5	10.0	790	65	745	65
10.0	6.3	625	56	565	42
Total		3184	326	2845	300

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%)	10.24
Elongation Index(%)	10.54
Combined FI+EL (%)	20.78

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Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore					
Contractor	Sri.A G. Narayana Swamy.					
AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)						
Proposed Use	WMM	Date of Sampling	23-09-2021			
Sample Location	Rajanna House Road from Thirumenahalli Road to Agrahara Layout	Date of Testing	24-09-2021			
Sl. No.	Description		Test No.			Spec Limit (%)
			1	2	3	
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	365.00	371.00	342.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	272.00	280.00	258.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	93.00	91.00	84.00	
4	Aggregate Impact Value (%)	$(Wc/Wa)*100$	25.48	24.53	24.56	
5	Average Aggregate impact value	(%)	24.86			Max - 30 %
Remarks : ✓ Satisfactory / Not Satisfactory						
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AE
2024/09/24
Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

for
2024/09/24

[Signature]
Consultant's Representative

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Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore
Contractor	:	Sri.A G. Narayana Swamy.
Date of Testing	:	24-09-2021
Type of Mix	:	WMM
Sample I/D	:	WMM 9

GRADATION FOR WMM

(As per MORT&H 400-11)

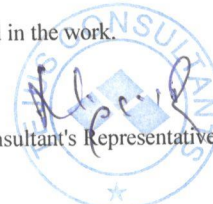
Sample Location:	Agrahara Layout Main Road	Date of Sampling:	23-09-2021		
		Date of testing:	24-09-2021		
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
53	0	0	0.00	100.00	100.00
45	367	367	3.67	96.33	95-100
22.4	2415	2782	27.82	72.18	60-80
11.2	2480	5262	52.62	47.38	40-60
7.5	488.0	6750	67.50	32.50	25-40
2.36	795.0	7545	75.45	24.55	15-30
0.6	830.0	8375	83.75	16.25	8.0-22.0
0.075	995.0	9370	93.70	6.30	0-8
Pan	630.0	10000			
Total	10000.0				

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Kundly
SC

Consultant's Representative



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Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore
Contractor	:	Sri.A G. Narayana Swamy.
Date of Testing	:	24-09-2021
Type of Mix	:	WMM
Sample I/D	:	WMM 10

GRADATION FOR WMM

(As per MORT&H 400-11)

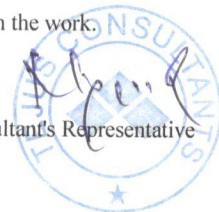
Sample Location:	Noor Nagar Main Road	Date of Sampling:	23-09-2021		
		Date of testing:	24-09-2021		
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
53	0	0	0.00	100.00	100.00
45	382	382	3.82	96.18	95-100
22.4	2415	2797	27.97	72.03	60-80
11.2	2480	5277	52.77	47.23	40-60
4.75	1488.0	6765	67.65	32.35	25-40
2.36	95.0	7560	75.60	24.40	15-30
0.85	830.0	8390	83.90	16.10	8.0-22.0
0.075	995.0	9385	93.85	6.15	0-8
Pan	615.0	10000			
Total	10000.0				

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Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore
Contractor	:	Sri.A G. Narayana Swamy.
Date of Testing	:	24-09-2021
Type of Mix	:	WMM
Sample I/D	:	WMM 5

GRADATION FOR WMM

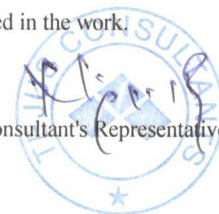
(As per MORT&H 400-11)

Sample Location:	Thirumenahalli Main Road	Date of Sampling:	23-09-2021		
		Date of testing:	24-09-2021		
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
53	0	0	0.00	100.00	100.00
45	369	369	3.69	96.31	95-100
22.4	2415	2784	27.84	72.16	60-80
11.2	2480	5264	52.64	47.36	40-60
7.5	1488.0	6752	67.52	32.48	25-40
2.36	795.0	7547	75.47	24.53	15-30
0.85	830.0	8377	83.77	16.23	8.0-22.0
0.075	995.0	9372	93.72	6.28	0-8
Pan	628.0	10000			
Total	10000.0				

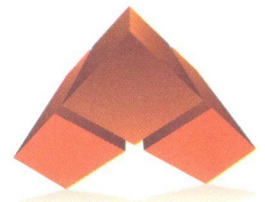
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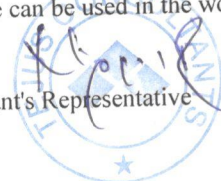
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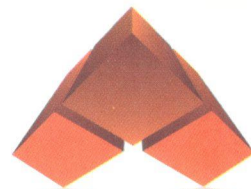
**TEJUS**

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Client	Bruhat Bengaluru Mahanagara Palike	
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	Sri.A G. Narayana Swamy.	
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))		
	Date: 24-09-2021	
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainage	Agrahara Layout Main Road at Ch:505	Agrahara Layout Main Road at Ch:640
Wt. of wet material from hole (Ww) gms.	5991	5978
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10594
Wt. of sand in hole+ cone (w3) gms.	4405	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3326
Bulk density of sand (γ_s)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γ_b)= $(Ww/w4*(\gamma_s))$ gm/cc	2.38	2.37
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)= $(100\gamma_b/100+mc)$ gm/cc	2.24	2.23
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.47	98.41
% compaction required	98%	98%
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K. Srinivas
30

Consultant's Representative



**TEJUS**

Project	Development works to be under taken in ward no.5 of BBMP around solidwaste disposal procesing units bellalli bagaluru and kattigenalli , byatarayanapura constituency ,
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

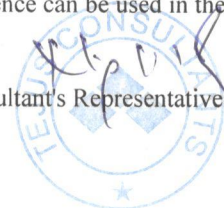
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))

	Date: 24-09-2021	
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainage	Thirumenahalli Main Road at Ch:220	Thirumenahalli Main Road at Ch:375
Wt. of wet material from hole (Ww) gms.	5985	5992
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10594
Wt. of sand in hole+ cone (w3) gms.	4405	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3326
Bulk density of sand (γ_s)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γ_b)=($Ww/w4*(\gamma_s)$)gm/cc	2.38	2.38
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)=($100\gamma_b/100+mc$)gm/cc	2.23	2.24
MDD	2.27	2.27
O.M.C	6.10%	6.10%
% compaction obtained	98.37	98.64
% compaction required	98%	98%

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Consultant's Representative

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TEJUS CONSULTANTS

No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

Project	Developments works to be under taken in Ward No.05 of BBMP around Solid Waste Disposal Processing units Bellahalli, Bagaluru and Kattigenahalli Byatarayanapura Constituency.		
Client	Bruhat Bengaluru Mahanagara Palike		
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore		
Contractor	Sri.A G. Narayana Swamy.		

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Proposed Use		WMM	Date of Sampling		30-09-2021		
Sample Location		Thirumenahalli Main Road	Date of Testing		01-10-2021		
Sl. No.	Description		Test No.			Spec Limit (%)	
			1	2	3		
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)		(Wa)	363.00	374.00	342.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)		(Wb)	272.00	280.00	258.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)		(Wc)	91.00	94.00	84.00	
4	Aggregate Impact Value (%)		(Wc/Wa)*100	25.07	25.13	24.56	
5	Average Aggregate impact value		(%)	24.92			Max - 30 %

Remarks :

✓ Satisfactory / Not Satisfactory

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Consultants Representative

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Client	Bruhat Bengaluru Mahanagara Palike		
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore		
Contractor	Sri.A G. Narayana Swamy.		

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material	WMM	Proposed Use	WMM
Sample Location	Eshwara Condiments Side Road (Meadows Apartment Opp)	Date of Sampling	30-09-2021
		Date of Testing	01-10-2021

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	616	84	522	76
16.0	12.5	1130	120	980	115
12.5	10.0	775	56	720	56
10.0	6.3	620	65	566	45
Total		3141	325	2788	292

Note: Minimum 200 Nos should be taken on each fraction of test

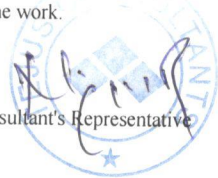
Flakiness Index(%):	10.35
Elongation Index(%):	10.47
Combined FI+EL (%)	20.82

Note:

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[Signature]

Consultant's Representative



Name of Work	:	Developments works to be under taken in Ward No.05 of BBMP around Solid Waste Disposal Processing units Bellahalli, Bagaluru and Kattigenahalli Byatarayanapura Constituency.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore
Contractor	:	Sri.A G. Narayana Swamy.
Date of Testing	:	01-10-2021
Type of Mix	:	WMM
Sample I/D	:	WMM 6

GRADATION FOR WMM

(As per MORT&H 400-11)

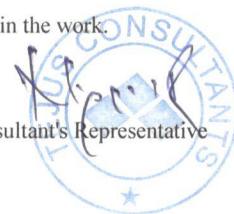
Sample Location:	Rajanna House Road from Thirumenahalli Road to Agrahara Layout Main Road	Date of Sampling:	30-09-2021		
		Date of testing:	01-10-2021		
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
53	0	0	0.00	100.00	100.00
45	372	372	3.72	96.28	95-100
22.4	2415	2787	27.87	72.13	60-80
12.5	2480	5267	52.67	47.33	40-60
4.75	1488.0	6755	67.55	32.45	25-40
2.36	795.0	7550	75.50	24.50	15-30
0.6	830.0	8380	83.80	16.20	8.0-22.0
0.075	995.0	9375	93.75	6.25	0-8
Pan	625.0	10000			
Total	10000.0				

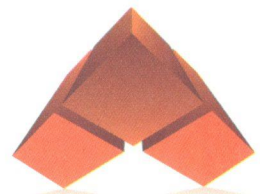
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K. Srinivas

Consultant's Representative



**TEJUS**

Project	Development works to be under taken in ward no.5 of BBMP around solidwaste disposal procesing units bellalli bagaluru and kattigenalli , byatarayanapura constituency ,
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

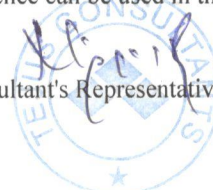
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))

	Date: 01-10-2021	
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainage	Agrahara Layout Main Road at Ch:270	Agrahara Layout Main Road at Ch:340
Wt. of wet material from hole (Ww) gms.	5983	5988
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10594
Wt. of sand in hole+ cone (w3) gms.	4405	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3326
Bulk density of sand (γ_s)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γ_b) = $(Ww/w_3) * (\gamma_s)$ gm/cc	2.38	2.38
Moisture meter reading (moisture content)	6.40	6.20
Result		
FDD (Wt. of the dry material) = $(100\gamma_b/100+mc)$ gm/cc	2.23	2.24
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.34	98.58
% compaction required	98%	98%

Note:

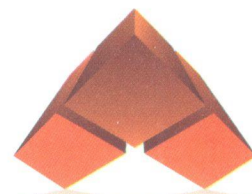
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Consultant's Representative



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**TEJUS**

Project	Development works to be under taken in ward no.5 of BBMP around solidwaste disposal procesing units bellalli bagaluru and kattigenalli , byatarayanapura constituency ,
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

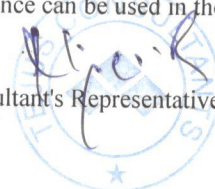
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))

	Date: 01-10-2021	
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainage	Rajanna House Road at Ch:75	Rajanna House Road at Ch:190
Wt. of wet material from hole (Ww) gms.	5978	5986
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10594
Wt. of sand in hole+ cone (w3) gms.	4405	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3326
Bulk density of sand (γ_s) gm/cc	1.32	1.32
Bulk density of material (i.e. wt. of the wet material) (γ_b) = $(Ww/w3)(\gamma_s)$ gm/cc	2.37	2.38
Moisture meter reading (moisture content)	6.40	6.20
Result		
FDD (Wt. of the dry material) = $(100\gamma_b/100+mc)$ gm/cc	2.23	2.24
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.26	98.55
% compaction required	98%	98%

Note:

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Consultant's Representative



TEJUS CONSULTANTS

No. 5B, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

Project	Developments works to be under taken in Ward No.05 of BBMP around Solid Waste Disposal Processing units Bellahalli, Bagaluru and Kattigenahalli Byatarayanapura Constituency.					
Client	Bruhat Bengaluru Mahanagara Palike					
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore					
Contractor	Sri.A G. Narayana Swamy.					
AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)						
Proposed Use	WMM	Date of Sampling	07-10-2021			
Sample Location	Chokkanahalli Layout Main Road	Date of Testing	08-10-2021			
Sl. No.	Description		Test No.			Spec Limit (%)
			1	2	3	
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	367.00	373.00	340.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	272.00	280.00	258.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	95.00	93.00	82.00	
4	Aggregate Impact Value (%)	$(Wc/Wa)*100$	25.89	24.93	24.12	
5	Average Aggregate impact value	(%)	24.98			Max - 30 %
Remarks		Satisfactory / Not Satisfactory				
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						Consultant's Representative

[Signature]

Project	Developments works to be under taken in Ward No.05 of BBMP around Solid Waste Disposal Processing units Bellahalli, Bagaluru and Kattigenahalli Byatarayanapura Constituency.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.A G. Narayana Swamy.

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material	WMM	Proposed Use	WMM
Sample Location	Noor Nagar Main Road	Date of Sampling	07-10-2021
		Date of Testing	08-10-2021

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	640	82	524	72
16.0	12.5	1128	122	970	115
12.5	10.0	774	64	725	56
10.0	6.3	612	61	564	45
Total		3154	329	2783	288

Note: Minimum 200 Pcs should be taken on each fraction of test

	Flakiness Index(%):	10.43
	Elongation Index(%):	10.35
	Combined FI+EL (%)	20.78

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